

## 10. Ximena

**Program Name:** Ximena.java

**Input File:** ximena.dat

Like Violeta, Ximena loves palindromes, and especially likes to create her own. She'll take a sentence and make a palindrome sentence, taking each word of the sentence, creating a double palindrome for each word. A double palindrome is created when you take the first half of a word, spell it forwards, and then backwards, and then the second half of the word, spell it forwards and backwards, and then connect those two into one long word.

An even more fun thing Ximena loves to do is to take words with an odd number of characters, and do the first half of the word in forwards/backwards order, and then the second part of the word in backwards/forwards order. The middle letter of an odd length word is only used in the second half of the word.

For words of even length, she does the opposite - first half backwards/forwards, last half forwards/backwards.

For example, using her name, XIMENA, she would make a double palindrome that looks like this: MIXXIMENAANE

Using her friend's name, VIOLETA, she would create this: VIOOIVATELLETA

For her other friend, ABE, the result is AAEBBE

**Input:** A list of capitalized names, each at least two letters and no more than 20 in length.

**Output:** A double palindrome, as described and demonstrated above, each on a separate line, in all caps.

**Sample Input:**

XIMENA  
VIOLETA  
ABE

**Sample Output:**

MIXXIMENAANE  
VIOOIVATELLETA  
AAEBBE